CONTENTS OF VOLUME 9

Number 1

C. J. TALBOT, D. R. HUNTER and A. R. ALLEN — 1 — Deformation of the Assegaai supracrustals and adjoining granitoids, Transvaal, South Africa

D. C. MURPHY — 13 — Suprastructure/infrastructure transition, east-central Cariboo Mountains, British Columbia: geometry, kinematics and tectonic implications

A. VAUCHEZ, D. MAILLET and J. SOUGY — 31 — Strain and deformation mechanisms in the Variscan nappes of Vendée, South Brittany, France

R. A. AGAR — 41 — The Najd fault system revisited; a two-way strike-slip orogen in the Saudi Arabian Shield

J. G. SPRAY — 49 — Artificial generation of pseudotachylyte using friction welding apparatus: simulation of melting on a fault plane

A. GUDMUNDSSON — 61 — Tectonics of the Thingvellir fissure swarm, SW Iceland

R. D. ROGERS and D. K. BIRD — 71 — Fracture propagation associated with dike emplacement at the Skaergaard intrusion, East Greenland

J. M. DIXON and D. G. SIMPSON — 87 — Centrifuge modelling of laccolith intrusion

Brevia

G. MANDL — 105 — Discontinuous fault zones

S. K. GHOSH — 111 — Measure of non-coaxiality

R. PANOZZO — 115 — Two-dimensional strain determination by the inverse SURFOR wheel

M. A. COOPER and M. L. F. BAMFORD — 121 — A note on photography in structural geology

Number 2

S. MCCOURT and J. R. VEARNCOMBE — 127 — Shear zones bounding the central zone of the Limpopo Mobile Belt, southern Africa

R. WEIJERMARS — 139 — The Palomares brittle–ductile Shear Zone of southern Spain

Y. GAUDEMER and P. TAPPONNIER — 159 — Ductile and brittle deformations in the northern Snake Range, Nevada

C. DOGLIONI — 181 — Tectonics of the Dolomites (Southern Alps, Northern Italy)

C. E. POSTLETHWAITE and C. E. JACOBSON — 195 — Early history and reactivation of the Rand thrust, southern California

W. R. JAMISON — 207 — Geometric analysis of fold development in overthrust terranes

S. MOSHER — 221 — Pressure-solution deformation of the Purgatory Conglomerate, Rhode Island (U.S.A.): quantification of volume change, real strains and sedimentary shape factor

D. Sokoutis — 233 Finite strain effects in experimental mullions

Brevia

R. C. Crane — 243 Use of fault cut-offs and bed travel distance in balanced cross-sections

P. Jackson — 247 The corrugation and bifurcation of fault surfaces by cross-slip

G. E. Lloyd, R. D. Law and S. M. Schmid — 251 A spherical electron channelling pattern map for use in quartz petrofabric analysis: correction and verification

P. Hancock, M. Boccaletti and G. Moratti — 255 Report on a meeting of the Research Group on Recent Brittle Tectonics in the Western Mediterranean area

W. Jaroszewski — 258 Letter to the Editors: An international tectonic project in Eastern Countries

259 Book and Video Reviews

261 Errata

Number 3

L. Ratschbacher and G. Oertel — 263 Superposed deformations in the Eastern Alps: strain analysis and microfabrics

S. K. Ghosh and S. Sengupta — 277 Progressive development of structures in a ductile shear zone

G. H. Davis, A. F. Gardulski and G. S. Lister — 289 Shear zone origin of quartzite mylonite and mylonitic pegmatite in the Coyote Mountains metamorphic core complex, Arizona

N. Culshaw — 299 Microstructure, *c*-axis pattern, microstrain and kinematics of some *S–C* mylonites in Grenville gneiss

G. Courrioux — 313 Oblique diapirism: the Criffel granodiorite/granite zoned pluton (southwest Scotland)

C. K. Morley — 331 Lateral and vertical changes of deformation style in the Osen–Røa thrust sheet, Oslo Region

C. Townsend — 345 Thrust transport directions and thrust sheet restoration in the Caledonides of Finnmark, North Norway

N. H. Woodcock — 353 Kinematics of strike–slip faulting, Builth Inlier, Mid-Wales

A. M. McCoss — 365 Practical section drawing through folded layers using sequentially rotated cubic interpolators

Brevia

W. G. Higgs and G. D. Williams — 371 Displacement efficiency of faults and fractures

R. T. Williams — 375 Energy balance for large thrust sheets and fault–bend folds

J. R. Martinez-Catalan and M. A. Diez-Balda — 381 Structural pattern and ascent model in the Central Extremadura batholith, Hercynian belt, Spain: Discussion

A. CASTRO — 383 Structural pattern and ascent model in the Central Extremadura batholith, Hercynian belt, Spain: Reply

Number 4

S. B. PAVLIDES and D. M. MOUNTRAKIS — 385 Extensional tectonics of northwestern Macedonia, Greece, since the late Miocene

I. DAVISON — 393 Normal fault geometry related to sediment compaction and burial

H. K. BRUECKNER, W. S. SNYDER and M. BOUDREAU — 403 Diagenetic controls on the structural evolution of siliceous sediments in the Golconda allochton, Nevada, U.S.A.

C. ROERING and C. A. SMIT — 419 Bedding-parallel shear, thrusting and quartz vein formation in Witwatersrand quartzites

C. N. WINSOR — 429 An example of the use of veins to establish a cover fold history—Irregully Formation, Western Australia

A. J. STEWART — 441 Fault reactivation and superimposed folding in a Proterozoic sandstone–volcanic sequence, Davenport Province, central Australia

B. TAPP and J. WICKHAM — 457 Relationships of rock cleavage fabrics to incremental and accumulated strain in the Conococheague Formation, U.S.A.

J. F. RAOULT and F. MEILLIEZ — 473 The Variscan Front and the Midi Fault between the Channel and the Meuse River

E. GILBERT and O. MERLE — 481 Extrusion and radial spreading beyond a closing channel

D. BARR — 491 Structural/stratigraphic models for extensional basins of half-graben type

Brevia

J. S. WHALLEY — 501 The use of a digitizing tablet to automate R_f/ϕ calculations

H. A. K. CHARLESWORTH — 503 Computer-constructed block diagrams of folded and thrust-faulted strata

M. WALTERS — 505 Structural orientation files: creation, modification and storage using a BBC microcomputer

P. D. RYAN — 507 The use of computer animation techniques in the teaching of stereographic projection

D. J. SANDERSON and S. J. L. PHILLIPS — 511 Strain analysis using length-weighting of deformed random line elements

R. J. FIRMAN, C. A. BOULTER and J. S. RATHORE — 515 Letters to the Editors: A magnetic fabric study of the Shap region in the English Lake District

517 Book Reviews

519 Erratum

520 Diary

Number 5/6

Introduction

P. R. COBBOLD and D. GAPAIS 521 Shear criteria in rocks: an introductory review

Section I: Regional studies at various crustal levels

P. CHOUKROUNE, D. GAPAIS and O. MERLE 525 Shear criteria and structural symmetry

C. K. MAWER 531 Shear criteria in the Grenville Province, Ontario, Canada

J. MALAVIEILLE 541 Kinematics of compressional and extensional ductile shearing deformation in a metamorphic core complex of the north-eastern Basin and Range

J. MARCOUX, J.-P. BRUN, J.-P. BURG and L. E. RICOU 555 Shear structures in anhydrite at the base of thrust sheets (Antalya, Southern Turkey)

R. F. BERRY and A. E. GRADY 563 Mesoscopic structures produced by Plio-Pleistocene wrench faulting in South Sulawesi, Indonesia

Section II: Sense of slip on faults

P. L. HANCOCK and A. A. BARKA 573 Kinematic indicators on active normal faults in western Turkey

W. D. MEANS 585 A newly recognized type of slickenside striation

P. LAURENT 591 Shear-sense determination on striated faults from *e* twin lamellae in calcite

J. P. PETIT 597 Criteria for the sense of movement on fault surfaces in brittle rocks

J. F. GAMOND 609 Bridge structures as sense of displacement criteria in brittle fault zones

F. M. CHESTER and J. M. LOGAN 621 Composite planar fabric of gouge from the Punchbowl Fault, California

Section III: Patterns of faults or shear zones

D. GAPAIS, P. BALE, P. CHOUKROUNE, P. R. COBBOLD, Y. MAHJOUB and D. MARQUER 635 Bulk kinematics from shear zone patterns: some field examples

J. M. CASAS and F. SÀBAT 647 An example of three-dimensional analysis of thrust-related tectonites

J. H. BEHRMANN 659 A precautionary note on shear bands as kinematic indicators

Section IV: Pressure shadows and porphyroblasts

A. ETCHECOPAR and J. MALAVIEILLE 667 Computer models of pressure shadows: a method for strain measurement and shear-sense determination

C. W. PASSCHIER 679 Stable positions of rigid objects in non-coaxial flow—a study in vorticity analysis

J. VAN DEN DRIESSCHE and J.-P. BRUN 691 Rolling structures at large shear strain

Section V: Petrofabrics

A. Etchecopar and G. Vasseur — 705 — A 3-D kinematic model of fabric development in polycrystalline aggregates: comparisons with experimental and natural examples

D. K. O'Brien, H.-R. Wenk, L. Ratschbacher and Z. You — 719 — Preferred orientation of phyllosilicates in phyllonites and ultramylonites

H.-R. Wenk, T. Takeshita, E. Bechler, B. G. Erskine and S. Matthies — 731 — Pure shear and simple shear calcite textures. Comparison of experimental, theoretical and natural data

S. M. Schmid, R. Panozzo and S. Bauer — 747 — Special Research Paper. Simple shear experiments on calcite rocks: rheology and microfabric

Number 7

S. F. Cox — 779 — Antitaxial crack–seal vein microstructures and their relationship to displacement paths

G. Williams and I. Vann — 789 — The geometry of listric normal faults and deformation in their hangingwalls

D. G. Croot — 797 — Glacio-tectonic structures: a mesoscale model of thin-skinned thrust sheets?

A. J. Dennis and D. T. Secor — 809 — A model for the development of crenulations in shear zones with applications from the Southern Appalachian Piedmont

R. D. Law — 819 — Heterogeneous deformation and quartz crystallographic fabric transitions: natural examples from the Moine Thrust zone at the Stack of Glencoul, northern Assynt

F. Odonne and P. Vialon — 835 — Hinge migration as a mechanism of superimposed folding

J. Hibbard and D. E. Karig — 845 — Sheath-like folds and progressive fold deformation in Tertiary sedimentary rocks of the Shimanto accretionary complex, Japan

P. D. Barrette and T. J. Calon — 859 — Re-imbrication of the Hawasina allochthons in the Sufrat ad Dawh range, Oman Mountains

M. Boccaletti, G. Cello and L. Tortorici — 869 — Transtensional tectonics in the Sicily Channel

S. H. Lamb and P. Vella — 877 — The last million years of deformation in part of the New Zealand plate-boundary zone

Brevia

D. G. De Paor — 893 — Stretch in shear zones: implications for section balancing

D. M. Ragan — 897 — Strain from three measured stretches

W. R. Muehlberger and M. B. Gordon — 899 — Observations on the complexity of the East Anatolian Fault, Turkey

H. Eichentopf and R. O. Greiling — 905 — Arcuate hinge cleavage associated with welded contacts: an example

M. Sossa-Simawango, B. Henry and L. Daly — 911 Magnetic structural analysis of the Montmarault granite (French Massif Central)

Number 8

T. B. Holst and H. Fossen — 915 Strain distribution in a fold in the West Norwegian Caledonides

J.-P. Burg — 925 Regional shear variation in relation to diapirism and folding

W. S. Vogler — 935 Fabric development in a fragment of Tethyan oceanic lithosphere from the Piemonte ophiolite nappe of the Western Alps, Valtournanche, Italy

F. Ghisetti — 955 Mechanisms of thrust faulting in the Gran Sasso chain, Central Apennines, Italy

J. L. Alonso — 969 Sequences of thrusts and displacement transfer in the superposed duplexes of the Esla Nappe Region (Cantabrian Zone, NW Spain)

D. L. Southwick — 985 Bundled slaty cleavage in laminated argillite, north-central Minnesota

N. S. Mancktelow — 995 Atypical textures in quartz veins from the Simplon Fault Zone

M. W. Jessell — 1007 Grain-boundary migration microstructures in a naturally deformed quartzite

P. Rochette — 1015 Magnetic susceptibility of the rock matrix related to magnetic fabric studies

N. Odling — 1021 The determination of 'buckling rotation' and its application to theoretical and experimental models of buckle folds

A. Schedl and D. V. Wiltschko — 1029 Possible effects of pre-existing basement topography on thrust fault ramping

J. J. Walsh and J. Watterson — 1039 Distributions of cumulative displacement and seismic slip on a single normal fault surface

Brevia

J. Wheeler — 1047 Variable-heave models of deformation above listric normal faults: the importance of area conservation

J. J. Walsh and J. Watterson — 1051 Displacement efficiency of faults and fractures: Discussion

R. J. Lisle — 1053 Report on a meeting of the Tectonic Studies Group on paleostresses and fault systems

1055 Book Reviews

1059 Referees for Volume 9

i Contents and Author Index, Volume 9